Trustworthy Digital Society Hub UNSW May 2025

**A Global Trust Index for Sovereign & Sub-Sovereign Assessments**

# Introduction

The governing institutions of a country, region, or municipality express their effectiveness through the quality of public services that they deliver. Institutions translate policy into practice through planning, funding, implementing, and maintaining service operations that fulfil complex social and economic needs. Standards of public services enjoyed by different populations reflect the competence, reliability, adaptability, innovation, and accountability of their respective governments. The capacity of governments to deliver necessary services to individuals – both on a general basis and during individuals’ critical life-events – forms a basis for their popular legitimacy. Credit ratings agencies, in their assessments of sovereign and sub-sovereign borrowers, may reasonably consider the quality of government services to inform evaluations of institutional trustworthiness.

Digital transformation enables increasingly real-time monitoring of institutional performance. Digital public service platforms support the generation of voluminous data on service quality: objective metrics for processes and outcomes, and subjective metrics for user experience and trust. Measures of public service quality constructed from this data may be able to proxy as indicators for institutional credibility at the national, regional, and local levels of government. A benchmarking indicator that standardises the measurement of government service quality – leveraging data on user-experience and public trust – could be designed for use as an input in sovereign and sub-sovereign credit assessments. Such an indicator – a ***global trust index*** – would be a statistic formally constructed to summarise quality and performance metrics across public-service portfolios of debt-issuing governments. The index would incorporate a systematic assessment of the trustworthiness of digital systems underlying government service provision, capturing an emerging element of critical institutional risk.[[1]](#footnote-1)

This note will describe current assessment methodologies of the three major credit ratings agencies – Moody’s, Standard & Poor’s, and Fitch – before considering the role that a global trust index could play in supporting credit assessments in the digital age.

# Assessment Frameworks

The three major credit ratings account for about 95% of credit ratings industry market share. These agencies categorise long-term debt instruments into *investment* (higher-price, lower-yield) and *speculative* (lower-price, higher-yield) grades (**Table 1**). Major agency ratings significantly affect governments’ financing costs, with prices of bonds and credit default swaps highly sensitive to the potential of major agency upgrades or downgrades. In addition to assigning ratings to government debt-instruments, agencies may also assign a positive or negative *outlook* in their assessments – indicating the direction of an expected future rating change. **Figures 1 and 2** show sovereign ratings currently assigned by the three major agencies and their negative correlation to ten-year sovereign yield spreads. Agency ratings grades have here been converted into to a common scale, with fractional adjustments for *positive* and *negative* outlooks.

***Table 1.*** *Ratings Agency Grades*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Grade | Description | S&P / Fitch | Moody’s | Countries (Averages) |
| Investment | *Prime* | AAA | Aaa | 🇨🇭 🇸🇬 🇳🇴 🇳🇱 🇩🇪 🇦🇺 🇸🇪 🇩🇰 🇨🇦 |
| *High Medium Grade* | AA+ | Aa1 | 🇳🇿 🇺🇸 🇫🇮 🇦🇹 |
| AA | Aa2 | 🇶🇦 🇹🇼 🇮🇪 🇰🇷 🇭🇰 |
| AA- | Aa3 | 🇬🇧 🇧🇪 🇨🇿 🇫🇷 |
| *Upper Medium Grade* | A+ | A1 | 🇮🇸 🇸🇮 🇯🇵 🇨🇳 |
| A | A2 | 🇱🇹 🇲🇹 🇨🇱 🇵🇹 🇸🇰 |
| A- | A3 | 🇵🇱 🇪🇸 🇭🇷 🇨🇾 🇮🇱 🇲🇾 |
| *Lower Medium Grade* | BBB+ | Baa1 | 🇧🇼 🇧🇬 |
| BBB | Baa2 | 🇵🇭 🇮🇹 🇮🇩 🇵🇪 🇰🇿 🇲🇽 |
| BBB- | Baa3 | 🇭🇺 🇬🇷 🇮🇳 🇲🇺 🇷🇴 |
| Speculative | *Speculative* | BB+ | Ba1 | 🇨🇴 🇷🇸 🇲🇦 🇻🇳 |
| BB | Ba2 | 🇧🇷 |
| BB- | Ba3 | 🇿🇦 🇯🇴 🇳🇦 🇹🇷 |
| *Highly Speculative* | B+ | B1 | 🇧🇩 |
| B | B2 | 🇧🇭 |
| B- | B3 | 🇺🇬 🇳🇬 🇪🇬 🇰🇪 |
| *Substantial Risk* | CCC+ | Caa1 | 🇵🇰 |
| CCC | Caa2 |  |
| CCC- | Caa3 | 🇱🇰 |
| *Extremely Speculative* | CC | Ca |  |
| C | 🇿🇲 🇺🇦 |
| *In Default* | D | C |  |
| No Rating |  |  |  | 🇷🇺 |

***Figure 1. Figure 2.***

A graph of different countries/regions

Description automatically generated A graph of different countries/regions

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Varying levels of detail on assessment frameworks have been made public by the three major agencies, although the precise methods used to determine credit ratings are proprietary and subject to regular change. All three agencies assign ratings based on similar sets of factors, making extensive use of primary data from established international sources including the International Monetary Fund (IMF), the World Bank, national statistics offices, and central banks. These can be supplemented using secondary (external) data sources, which commonly provide the indicative metrics used to score the qualitative institutional characteristics of governments.

## Moody’s

Moody's sovereign ratings are the outcome of a committee process that applies qualitative judgement to a quantitative scorecard. The scorecard is based on four factors:

1. **Economic Strength.** Assesses the inherent strength and resilience of the sovereign's economy using Gross Domestic Product (GDP) statistics for *Economic Scale (35%), Income Level (25%), Growth (30%)* and *Volatility (10%).*[[2]](#footnote-2)
2. **Institutions & Governance Strength.** Assesses more qualitative properties of sovereigns:

* the quality of legislative and executive institutions *(20%)*
* the strength of civil society and the judiciary *(20%)*
* the effectiveness of fiscal policy *(30%)*
* the effectiveness of monetary and macroeconomic policy *(30%)*.

Although these are qualitative properties, they are measured using quantitative external indicators, primarily the **World Bank Worldwide Governance Indicators (WGI).** The WGI include indicators for *Regulatory Quality*, *Government Effectiveness*, *Voice & Accountability, Rule of Law,* and *Control of Corruption*. The World Economic Forum (WEF) Global Competitiveness Index (CGI) has also been referenced for components relating to market efficiency, infrastructure, innovation, and education, and the IMF referenced for information on data adequacy for surveillance and assessments. World Bank Country Policy and Institutional Assessments (CIPA) have also been referenced, along with other independent external sources. Assessments of **Institutions & Governance Strength** are adjusted according to government default history and track record of arrears.

1. **Fiscal Health.** Assesses the sustainability of government finances using g*overnment debt burden (50%)* – the average of debt-to-GDP and debt-to-revenue ratios – and g*overnment debt affordability (50%)* – the average of the ratios of interest-payments-to-GDP and interest-payments-to-revenue. Adjustments to this factor are made according to expected changes in debt burden, the share of foreign-currency-denominated debt, and the value of public assets (including sovereign wealth funds).
2. **Susceptibility to Event Risk.** Assesses vulnerability to sudden, disruptive events, using four sub-factors:

* ***Political Risk:*** domestic political and geopolitical instability. Assessment refers to World Bank WGIs, along with socioeconomic indicators for unemployment and inequality.
* ***Government Liquidity Risk:***failure of government cash flow.
* ***Banking Sector Risk:***failure of national banking or payments systems.
* ***External Vulnerability Risk:***risks originating from current account position and its financing structure, sustainability of external liabilities, and access to hard currency. Risks from environmental factors also included.

Moody’s combines the **Economic Strength** and **Institutions & Governance Strength** factors with equal weights to produce an **Economic Resiliency** score. This is combined with the **Fiscal Health** factor to produce the **Government Financial Strength** assessment, with dynamic weights used that increase the relative importance of **Economic Resiliency** for wealthier sovereigns and increase the relative importance of **Fiscal Health** for less wealthy sovereigns. **Figure 3** shows weights typical for the wealthiest sovereigns (only one-quarter assigned to the **Fiscal Health** factor). The **Government Financial Strength** assessment can then be adjusted (*downward only*) according to the **Susceptibility to Event Risk** assessment, which uses a **minimum function** for aggregation that lets the weakest of its sub-factors determine its overall score. The final ratings decision is determined by the qualitative judgement of a **ratings committee**, which may consider various factors idiosyncratic to the sovereign.

***Figure 3.***

**Moody’s Sovereign Assessment Framework**

**Susceptibility to Event Risk**

Negative adjustment

(-2 to 0)

***worst of:***

**- political risk**

**- liquidity risk**

**- banking risk**

**- external vulnerability risk**

**Fiscal Health**

**- interest / revenue**

**- interest / gdp**

**- debt / revenue**

**- debt / gdp**

**Government Financial Strength**

*Dynamic weights ranging from* ***25:75*** *to*

***50:50*** *for* ***Fiscal Health : Economic Resiliency***

**Economic Resiliency**

**Institutions & Governance Strength**

**- legislative & executive institutions**

**- civil society & judiciary**

**- fiscal policy effectiveness**

**- monetary & macroeconomic policy effectiveness**

**Economic Strength**

**- scale**

**- income level**

**- growth rate**

**- volatility**

**Ratings Committee**

Qualitative Judgement

Sovereign

Rating

Moody's methodology for international sub-sovereign – Regional and Local Government (RLG) – ratings begins with a **Baseline Credit Assessment** of the sub-sovereign’s standalone credit strength, aggregating four **Weighted Factors**:

1. **Economy (25%):** *Regional Income* (15%, per capita GDP PPP), *Economic Growth* (5%), and *Economic Diversification* (5%, balance of local / regional economic activity across economic sectors).
2. **Institutional Framework and Governance (30%):**

* *Institutional Framework (15%):* the extent to which the prevailing framework for government powers and responsibilities is mature, robust, stable, and clearly defined in law; the process to change the framework is transparent and deliberate; and the framework provides for strong revenue-generating and expenditure flexibility.
* *Governance (15%):* the strength and transparency of fiscal planning and budget management.

1. **Financial Performance (20%):** *Operating margin* (10%), *liquidity ratio (5%), ease of access to funding (5%).*
2. **Leverage (25%):** *Debt burden* (15%) and *interest burden* (10%), as ratios to operating revenue.

The preliminary **Baseline Credit Assessment** is then adjusted according to:

* three ***Idiosyncratic Notching Factors:*** *Significant Pressures from Material Pension Obligations or Contingent Liabilities* (negative); *Ample Liquidity that Minimizes Borrowing Needs* (positive) and *Expected Trend in Fiscal Performance* (negative or positive); and
* a ***Macro Operating Assessment*** incorporating two factors: one for the influence of the Sovereign Rating on the Sub-sovereign; and an *Operating Environment* factor that considers the broader macroeconomic environment and institutional framework along with the extent of ordinary support from higher tiers of government.

The resulting **Baseline Credit Assessment** is evaluated together with an assessment of **Extraordinary Support**; the willingness and ability of a higher-tier government to support an RLG in financial stress beyond ordinary levels. The latter assessment is primarily based on five factors:[[3]](#footnote-3)

1. *Legal Framework / Policy*:the institutional requirements for (or barriers to) a higher-tier government providing support.
2. *Reputational Risk:* incentives for higher-tier government to mitigate the damage caused by the LRG default.
3. *Moral Hazard*: incentives for higher-tier government to avoid setting bailout precedents that may foster imprudent budgetary practices.
4. *Strategic Role:* attributes of the RLG that are relevant to the support decision.
5. *Bailout History*: the higher-tier government’s track record of providing extraordinary support.

Other factors – environmental, social, governance, liquidity, financial control, and event risk – may be considered by committee in final adjustments to the ratings decision (**Figure 4**). Unlike for sovereign assessments, Moody’s does not report on the use of external indicators for sub-sovereign assessments.

***Figure 4.***

**Moody’s Sub-Sovereign Assessment Framework**

International LGRs

**Weighted Factors**

**Idiosyncratic Notching Factors**

* Pension Obligations / Contingent Liabilities (-2 to 0)
* Liquidity (0 to +1)
* Expected Fiscal Trend

(-2 to + 2)

Sovereign Rating

**Baseline Credit Assessment**

**Leverage 25%**

**- debt burden**

**- interest burden**

**Economy 25%**

**- income**

**- growth**

**- diversification**

**Extraordinary Support**

**Likelihood of Support**

* Legal Framework / Policy
* Reputational Risk
* Moral Hazard
* Strategic Role

**Joint Default Analysis**

**Macro Operating Assessment**

**Financial Performance 20%**

**- operating margin**

**- liquidity ratio**

**- ease of access to funding**

**Sovereign Rating Threshold**

**Ratings Committee**

Qualitative Assessment

**Institutional Framework & Governance 30%**

**- institutional framework**

**- governance**

**Operating Environment**

* Macroeconomic Environment
* Institutional Framework
* Ordinary Support from Higher-Tier Governments

Sub-Sovereign Rating

Because the influence of the sovereign rating on the sub-sovereign rating is much less important for RLGs inside the United States than internationally, Moody’s uses different frameworks for credit assessments of sub-sovereigns inside the United States. The U.S. frameworks do not reference the sovereign rating, with no **Extraordinary Support** assessment made due to a long-standing precedent against U.S. federal bailouts of subnational governments. The same four **Weighted Factors** are used, with differences in weights and in the component sub-factors. One set is used for U.S. state (and territory) governments and another for municipal (city and country) governments, with alternative quantitative inputs for sub-factors leveraging the availability of consistent data based on U.S. financial reporting standards (**Table 2**). Lower weights for the **Institutional Framework** factor in U.S. sub-sovereign assessments reflects the country’s more homogenous institutional and legal environment, with the ***Macro Operating Assessment***also omitted.[[4]](#footnote-4)

***Table 2.*** *Moody’s Sub-Sovereign Weighted Factors Weights*

|  |  |  |  |
| --- | --- | --- | --- |
| Factor | International (non-U.S.) | U.S. States & Territories | U.S. Cities & Counties |
| Economy | **25%**   * *Regional Income / GDP PPP (15)* * *Growth (5)* * *Diversification (5)* | **30%**   * *Resident Personal Consumption Income (15)* * *Growth vs U.S. National Growth (15)* | **30%**   * *Resident Median Household Income (10)* * *Property Tax Base (10)* * *Growth vs U.S. National Growth (10)* |
| Institutional Framework & Governance | **30%**   * *Institutional Framework (15)* * *Governance (15)* | **20%**  *Qualitative assessment of fiscal planning & management, debt management, revenue expenditure and flexibility* | **10%**  *Qualitative assessment of fiscal planning & management, debt management, revenue expenditure and flexibility* |
| Financial Performance | **20%**   * *Operating Margin (10)* * *Liquidity Ratio (5)* * *Ease of Access to Funding (5)* | **20%**  *Qualitative assessment of fund balance levels, liquidity strength, and structural balance* | **30%**   * *Available Fund Balance Ratio (20)* * *Liquidity Ratio (10)* |
| Leverage | **25%**   * *Debt Burden (15)* * *Interest Burden (10)* | **30%**   * *Long-term Liabilities Ratio (20)* * *Fixed-costs Ratio (10)* | **30%**   * *Long-term Liabilities Ratio (20)* * *Fixed-costs Ratio (10)* |

## Standard & Poor’s (S&P’s)

The S&P’s sovereign assessment methodology is based on two profiles incorporating five assessments:

1. **Institutional and Economic Profile:** the average score from two assessments:

* ***Institutional Assessment:*** the capacity to deliver sustainable public finances and balanced economic growth, and to respond effectively to economic and political shocks.
* ***Economic Assessment:*** income levels (GDP per capita at PPP), economic growth prospects, and economic diversity and volatility (based on sectoral composition of production and exports).

1. **Flexibility and Performance Profile:** the average score from three assessments:

* ***External Assessment:*** external position and liquidity with the rest of the world; status of sovereign’s currency in international transactions
* ***Fiscal Assessment:*** sustainability of a sovereign's fiscal policy, with components *Fiscal Performance and Flexibility* (trends and vulnerabilities) and *Debt Burden* (structure of debt, funding access and contingent liabilities)
* ***Monetary Assessment:*** evaluation of monetary policy credibility, the exchange-rate regime and its impact on policy coordination, and the diversification of the financial system and capital markets.

The two profiles are combined using a **risk matrix,** which specifies a particular outcome for every possible combination of profile levels.[[5]](#footnote-5) The resulting ***indicative rating level*** may then be modified according to ***supplemental adjustment factors*** (such as liquidity positions or significant event risk) to determine the final sovereign credit rating. Unlike Moody’s, S&P does not prescribe specific external indicators for sovereign assessments, although explanatory documentation implies that similar sources (e.g. World Bank WGIs) are likely to be referenced.

S&P’s international sub-sovereign (LRG) assessments are based on two primary assessments:

1. **Institutional Framework Assessment:** a composite of three factors:
   * ***Predictability (25%):***stability and predictability of institutional framework; frequency and impact of changes in laws, regulations, and intergovernmental fiscal arrangements.
   * ***Revenue and Expenditure Balance (50%):***adequacy of revenue sources to cover mandated services, flexibility to adjust revenues and expenditures, and overall fiscal discipline.
   * ***Transparency and Accountability (25%):***quality of financial statements, level of disclosure, effectiveness of oversight mechanisms.
2. **Individual Credit Profile Assessment:** a composite of five equally-weighted factors:
   * ***Economy:***socioeconomic profile, economic diversification, and growth prospects.
   * ***Financial Management:*** managerial quality and political impact on willingness and ability to service debt.
   * ***Budgetary Performance:*** level and volatility of cash flows for debt service.
   * ***Liquidity:*** adequacy of internal and external liquidity sources relative to servicing needs.
   * ***Debt burden:*** debt and interest relative to consolidated operating revenues.

The **Institutional Framework Assessment** and **Individual Credit Profile Assessment** are combined using a risk matrix to create a preliminary rating, which may then be adjusted according to the influence of the sovereign rating and other supplemental factors to arrive at the final credit assessment. For the same reasons as Moody’s, S&P’s distinguishes the assessment methodology for sub-sovereigns inside the United States. The U.S. framework is similar but removes the influence of the sovereign rating, while employing a slightly modified set of factors and quantitative inputs for the **Individual Credit Profile**.[[6]](#footnote-6)

## Fitch

Fitch’s framework is based on a quantitative **Sovereign Rating Model** that incorporates eighteen macro-fiscal and external features. These features are organised into four categories and combined using variable weights:[[7]](#footnote-7)

1. **Structural Features (53.7%):** *Composite governance indicator (22);[[8]](#footnote-8) GDP per capita (11.8); Share in world GDP (14.3); Default / restructuring record (4.5); Money supply (1.1)*
2. **Macroeconomic Performance (9.9%):** *Real GDP growth volatility (4.5); Consumer price inflation (3.6); Real GDP growth (1.8)*
3. **Public Finances (18.8%):** *Gross government debt (9); Interest payments (4.6); Budget balance (2.1); Foreign-currency government debt (3.0)*
4. **External Finances (17.6%):** *Reserve currency flexibility (7.2); Sovereign net foreign assets (7.5); Commodity dependence (1.1); Official international reserves (1.3); External interest service (0.2); Current account plus net Foreign Direct Investment (0.3)*

The rating generated by the **Sovereign Rating Model** is then refined by a **Qualitative Overlay** which allows adjustments to be made based on factors including forward-looking governance, policy credibility, fiscal financing flexibility, event risk, and banking-sector contingent liabilities. Final adjustments to the rating may be made based on **Extraordinary Considerations**, which includetail-events such as war or banking crises.

Fitch’s methodology for international Sub-Sovereigns begins with a **Standalone Credit Profile**, an assessment based on a risk-matrix that combines two elements:

1. **Risk Profile:** a composite of scores for six factors associated with risks to a borrower’s capacity to meet financial commitments; *Revenue robustness; Revenue adjustability; Expenditure sustainability; Expenditure adjustability; Liabilities-and-liquidity robustness; Liabilities-and-liquidity flexibility.*
2. **Financial Profile**: an evaluation of debts relative to funding resources, with different ratios and formulae used depending on the nature of government revenue structures (either municipalities or broad-taxing regions and provinces).

The **Standalone Credit Profile** may then be adjusted according to the sovereign rating, estimations of extraordinary support, and other considerations.

Like the other two major agencies, Fitch uses alternative methodologies for sub-sovereign assessments inside the United States. Fitch assessments of U.S. RLGs do not use a risk matrix. U.S. state government assessments are based on four “key rating drivers”:

1. ***Revenue Framework:*** Long-term growth prospects and the ability to raise taxes or fees.
2. ***Expenditure Framework****:* Expected baseline spending growth versus revenue trend and the ability to cut or defer costs.
3. ***Long-Term Liability Burden:*** Net tax-supported debt plus unfunded retirement liabilities.
4. ***Operating Performance:*** Reserve levels, historical budget management, stress-test performance.

Analyst judgement (rather than a specific set of weights) is used to combine these drivers; a minimum function may be used for aggregation. RLG finances are stress-tested against a severe-but-plausible downturn scenario to determine a provisional rating, which may then be adjusted according to other considerations (such as event risks) to arrive at a final rating. The methodology for states differs from local governments, with the latter substituting the four key drivers for a **Local Government Rating Model** (similar to Fitch’s **Sovereign Rating Model**) based on twelve standard metrics that capture the local government’s financial profile, demographic and economic strength, and long-term liability burden.

1. See the accompanying TDS note *An Index for Trustworthy Government in the Digital Age.* [↑](#footnote-ref-1)
2. *Scale* is measured using Nominal GDP, the annual value of all final domestic production (production for final consumption, investment, or export) gross of capital depreciation and net of imports. *Income* is per capita GDP adjusted for Purchasing Power Parity (PPP). PPP accounts for price differentials between countries and generally raises real-income estimates for lower-income countries. *Growth* is ten-year centred-average GDP growth, using five-year future growth forecasts published by the annual IMF World Economic Outlook (WEO). *Volatility* is measured as the Median Absolute Deviation in GDP growth over ten years. [↑](#footnote-ref-2)
3. The five factors determine a ***Likelihood of Support*** assessment, which is considered jointly in the **Extraordinary Support** assessment with the higher-tier supporting government’s credit rating and a ***Joint Default Analysis*** which incorporates an estimate of the default correlation between the two entities. [↑](#footnote-ref-3)
4. Alternate ***Notching Factors*** – different for state and local governments – are used to adjust the preliminary assessment, with further adjustments potentially made for other considerations. The methodology for U.S. sub-sovereigns also includes **Instrument-Level Ratings**, adjustments to the Issuer Default Rating that are applied to rate the different types of securities issued in U.S. LRG debt markets; general obligation bonds (unlimited and limited tax), contingent obligations (appropriation, lease, and moral obligations), and special tax pledges. [↑](#footnote-ref-4)
5. Combining two indicators in a risk matrix means that the resulting assessment score does not need to be a simple function of the component scores, such as a weighted average. [↑](#footnote-ref-5)
6. The Individual Credit Profile for U.S. sub-sovereigns incorporates a range of standardised U.S. financial reporting metrics and places more importance on RLG cash reserves and retirement liabilities. [↑](#footnote-ref-6)
7. Fitch Sovereign Rating Model weights are regularly updated, based on feature coefficients yielded by multi-regression modelling. The given weights are the most-recently published (for 2025 assessments). [↑](#footnote-ref-7)
8. The [↑](#footnote-ref-8)